Draft Recommended FY 99 Priorities[1]

1.0 Preamble

Recommended priorities for the Action Plan established by the Technical Panel reflect the six goals identified for the draft Strategic Plan for Ecosystem Restoration. Rehabilitating the natural capacity and functional connectivity of the Bay-Delta estuary and its watershed will be the preferred method for achieving recovery and continued conservation of native species and for supporting safe, sustainable commercial and recreational fish and wildlife harvest. We recognize that in the short term, reducing stressors may have high value for some of these species. Long term success of ecological rehabilitation will require immediate protection or restoration of key functional habitat types and their connectivity.

2.0 Considerations

Based on the Strategic Plan Goals[2], projects should be designed to address the following goals:

A. (1) Achieve recovery of the listed native species[3] dependent on the Delta and Suisun Bay, (2) support recovery of listed native species in the Bay-Delta estuary and its watershed, and (3) provide for continued conservation of native species.

B. Rehabilitate the natural capacity[4] of the Bay-Delta estuary and its watershed to support, with minimal on-going human maintenance, native aquatic and associated terrestrial biological communities.

C. Maintain and enhance populations of selected species for safe consumption and sustainable commercial and recreational harvest, consistent with goals A and B.

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[1] The Ecosystem Roundtable has reviewed and commented on these priorities. Those comments have been considered in developing this draft.

[2] The Technical Panel used the draft of the Strategic Plan goals as they existed when this document was written. The Preliminary Draft of the Plan dated August 31, 1998 has slightly modified versions of the first four goals and two additional goals. These revised draft goals are included as an attachment to this document.

[3] The Technical Panel defined species as it is defined under the Endangered Species Act and so it would include Evolutionarily Significant Units which could include subspecies and some runs and races.

[4] The Technical Panel tentatively defined "natural capacity" as the ability of the system to maintain itself without artificial input.

D. Protect or restore a range of key, functional habitat types for biodiversity, scientific research, and other public uses.

The Technical Panel did not identify any of these goals as being of higher priority than any other; that is, it is the intent of the Technical Panel that actions be identified to address each of the four goals. In many cases, an action which addresses goal A will also address goal B.

The Management Team has recommended that 75 % of the funding be focused on actions which benefit the highest priority species identified under Goal A which are the listed fish species which depend on the Delta.

The Technical Panel recommends that the majority of the proposed actions should address multiple goals. However, in some cases, actions will be taken that only address one of the four goals. There may be a very specific problem, such as entrainment, for a listed species which can be solved only through an action, such as a fish screen, which neither results in habitat protection or in rehabilitation of the natural system. There could also be an area wherein the natural system is in need of rehabilitation, such as the upper watersheds, where there is a level of uncertainty about the direct benefit of an action to the priority species.

There is broad recognition that the proposed actions will be implemented through adaptive management, which by definition, requires moving forward in the face of scientific uncertainty and learning from the actions taken. This will require that actions be categorized by the level of scientific uncertainty and where uncertainty is high, actions be taken in recognition of that uncertainty. This may involve focused research, pilot projects, or other steps prior to broad implementation.

While the actions to be taken based on these priorities are primarily for the benefit of the ecosystem, they, by their nature, can also provide benefits for other CALFED objectives including water quality, levee system reliability, and water supply reliability. This synergy has previously been recognized and promoted through application of review criteria. The program will continue this practice as actions are selected using these priorities.

3.0 Restoration Approaches

3.1 Rehabilitation and Protection of Natural Processes and Habitats

Rehabilitating the natural capacity of the Bay-Delta estuary and its watershed and protecting and restoring a range of functional habitat types will require that individual actions be evaluated to ensure that they contribute towards the goals listed above in

Section 2.0. It will also be necessary to evaluate individual proposed actions in the context of other actions to ensure that all important ecological attributes have been addressed and to ensure that the resulting mosaic of habitats are appropriately connected and distributed, and are of sufficient size, configuration, and quality.

Ecological attributes and performance indicators are being developed for the following:

- Hydrologic processes, condition, and function
- Geogmorphic processes, condition, and function
- Natural habitat
- Native biological communities
- Community energetics, and nutrient and biogeochemical cycles

The following ecological guidelines can guide restoration efforts:

- Emphasize ecosystem processes and functions that increase and sustain target habitats and species.
- When feasible, emphasize restoration of ecosystem processes using natural self-sustaining methods.
- Emphasize protection and enhancement of existing habitats and processes over restoration or creation.
- Emphasize actions that provide multiple benefits to species, habitats, and processes.
- Give equal consideration to projects designed to address problems for which causes and remedies remain uncertain. (Suggested edit: delete "equal".)
- ***Recognize the level of scientific uncertainty associated with various actions and move forward with them appropriately.***

- ***Recognize and incorporate scientific uncertainty into planning decisions. As much as possible, design and treat management actions as experiments that will allow specific hypotheses to be tested under field conditions.***

- ***Above all, implement actions as part of adaptive management so that future actions can build on actions implemented today.***

Additional ecological principles, being developed by a group working on the overall Ecosystem Restoration Program, will be included in the above list of guidelines.

Ecological processes are complex interactions that establish and sustain whole ecological systems. The stability and sustainability of such processes determine in large part the value and productivity affected ecological systems. The most effective and enduring restoration and maintenance of the Bay-Delta ecosystem is therefore one that stabilizes, restores and maintains the underlying ecological processes.

Because processes are descriptions of interactions among watershed constituents, and each constituent interacts with more than one other constituent, most ecological processes are not completely separable from other processes of varying scales. There are, however, some definable landscape scale processes that can be identified as essentially self contained. The processes of this scale most affecting the Bay-Delta ecosystem include[5]:

Central Valley Streamflows
Natural Sediment Supply
Stream Meander
Natural Floodplains and Flood Processes
Central Valley Stream Temperatures
Bay-Delta Hydraulics
Bay-Delta Aquatic Foodweb
Upper Watershed Processes - Fire and Erosion

~~The priority importance of each of these identified processes varies by geographic location in the Bay-Delta system, and by the desired goals of individual projects or programs. For this reason, the identified processes are not prioritized here. Rather, the use of a process-oriented approach to restoration of the Bay-Delta system is a priority. Projects that propose goal attainment through directly stabilizing, restoring, or maintaining the effectiveness of one or more of the listed processes will thus be preferred.~~

3.2 Native species recovery and conservation

The major issue in the Bay-Delta that led to the creation of CALFED centered on the conflicts between water management and the protection and recovery of listed species.

The highest priority is to achieve recovery of the listed fish species dependent on the Delta and Suisun Bay and most adversely affected by water management. These species are:

- Delta smelt
- Splittail
- Chinook salmon (all races)
- Steelhead trout
- ***Longfin smelt***

The second priority is to support recovery of listed water-, wetland-, and riparian-dependent species in the Bay-Delta Estuary and its watershed, and that are adversely affected to a lesser degree by water management than are the first priority species. These

[5] These processes are from Table 2, page 16-17 of the ERPP.

species ***include but are not limited to*** ~~are~~:

- Delta special status plant species[6]
- California red-legged frog
- Giant garter snake
- California freshwater shrimp
- Swainson's hawk
- Clapper rail
- California black rail
- Greater sandhill crane
- Western yellow-billed cuckoo
- Bank swallow
- Salt marsh harvest mouse
- Riparian brush rabbit
- Riparian woodrat
- Aleutian Canada goose[7]
- Valley elderberry longhorn beetle

The third priority is to provide for continued conservation of water-, riparian-, and wetland-dependent native species in the Bay-Delta Estuary and its watershed which, to some degree, are or have the potential to be adversely affected by water management. These species include candidate species and species of special concern.

In the near term, species in the Bay-Delta watershed that are not water-, wetland-, or riparian dependant will not be identified as a priority. However, if a project that produces benefits for a priority species also provides benefits for other listed species, it will receive preferential consideration. Examples include San Joaquin kit fox and the Bakersfield cactus.

3.3 Recreational and commercial species

Priorities for species that are important for their use by humans are guided by the need to provide for sustainable harvest and by the need to provide for safe consumption. Generally species that have experienced sharp declines or which have problems with body burdens of contaminants which cause human health concerns were identified as of equal importance.

Striped bass and sturgeon are species that would be identified as a priority under either approach because there have been both population declines and evidence of

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[6] Suisun thistle, soft bird's-beak, Mason's lilaeopsis, Delta button-celery.

[7] This species is currently being evaluated by the US Fish and Wildlife Service for potential de-listing.

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contamination. ***Northern pintail,*** salmon and steelhead are species that would be a priority because population declines have sharply limited opportunities for consumptive use.

Other species such as American shad and waterfowl have also experienced population declines which have limited harvest opportunities. Populations of waterfowl that are particulary sensitive to water management and/or whose body burdens pose health risks to human consumers will be given a higher priority. Health warnings for human consumption of waterfowl species have been identified for all species in the Grasslands area and for scaup and scoter species in Suisun Bay, San Pablo Bay and San Francisco Bay. Waterfowl species declines have been noted for the northern pintail, for sea ducks generally found in the bays such as eiders and scoters, and for the Lesser scaup. (Suggested edit: Delete reference to sea ducks because they are generally outside the scope of CALFED.)

4.0 Project Evaluation Criteria

The following criteria should be considered in evaluating actions:

- Appropriateness of the project to the mission and goals of CALFED and the relevance to the established priorities,
- Ecological and biological benefits, ***impacts, and uncertainties,***
- Qualifications of the applicants and adequacy of facilities for carrying out the proposed project,
- Technical merit of the proposed project,
- Technical and timing feasibility,
- Degree of cost sharing and local involvement,
- Compatibility with, and benefits for non-ecosystem CALFED objectives,
- Cost ***and cost-effective including not only direct project costs but overall costs and benefits of the project,***
- Adequacy of the monitoring, assessment, and reporting plans,
- Degree to which there is evaluation of and, where possible, resolution of biological uncertainty,
- The level of transferable knowledge and protocols,
- The degree of synergy with other projects at the landscape level,
- The likelihood of success.

The Management Team has recommended that 80% of the funds should be for implementation of actions as opposed to other phases such as planning and research.